

**JOB PERFORMANCE MEASURE**  
**NRC EXAM 2004-301-B2.I**

Job Position NO	No. NRC EXAM 2004-301-B2.i	Revision 1
JPM Title Defeat of RBCCW/EECW to Drywell	Duration 6 <del>25</del> min	Page COVER SHEET

**Note: Validation time appears inaccurate. Reasonable completion time was actually less than 10 minutes.**

Examinee: \_\_\_\_\_ SRO / RO

Evaluator: \_\_\_\_\_

Evaluation Method: Perform / Plant

Start Time \_\_\_\_\_

Stop Time \_\_\_\_\_

Total Time \_\_\_\_\_

<b>PERFORMANCE EVALUATION SUMMARY</b>			
Step #	S	U	Comments
*1			
*2			
*3			
4			

\_\_\_\_\_ SATISFACTORY

\_\_\_\_\_ UNSATISFACTORY

<b>ORAL EVALUATION (Not Required for ILO Exams)</b>			
Question #	S	U	Comments
			TIME:
			TIME:

\_\_\_\_\_ SATISFACTORY

\_\_\_\_\_ UNSATISFACTORY

**OVERALL EVALUATOR COMMENTS:**

Evaluator Signature / Date: \_\_\_\_\_

## JOB PERFORMANCE MEASURE

NRC EXAM 2004-301-B2.I

Defeat of RBCCW/EECW to Drywell	No.: NRC EXAM 2004-301-B2.i Revision: 1 Page 1
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References: Required (R) / Available (A)

[29.ESP.23](#), "Defeat of RBCCW/EECW to Drywell" (R)

Tools and Equipment Required:

None

Preferred Evaluation Method:

Perform	_____	Walkthrough	_____X_____	Discuss	_____
Plant	_____X_____	Simulator	_____	Classroom	_____

Evaluator Notes:

Evaluator Notes: Ensure SM informed of JPM walkthrough in relay room and cabinet doors opened for walkthrough of this task. Stop the JPM if, at any time, this JPM interferes with plant operation.

**ENSURE ALL INDUSTRIAL AND PERSONNEL SAFETY PRACTICES ARE USED AND ENFORCED AT ALL TIMES.**

**K/A**

SYSTEM: 295018 AA1.01 Ability to operate back-up systems upon partial loss of cooling water 3.3/ 3.4

223002 K.4.08 Manual defeat of selected isolations during emergency conditions 3.3 / 3.7

295024 EA1 Ability to operate and/or monitor the following as they apply to high drywell pressure:

PCIS/NSSSS 3.8/3.9

Task Standard:

RBCCW/EECW Defeats are installed per 29.ESP.23

Initial Conditions:

EOP flowcharts direct Defeat of RBCCW/EECW Logic per 29.ESP.23

Initiating Cue(s):

CRS directs you to defeat RBCCW/EECW Isolations per 29.ESP.23

**JOB PERFORMANCE MEASURE**  
NRC EXAM 2004-301-B2.I

Defeat of RBCCW/EECW to Drywell	No.: NRC EXAM 2004-301-B2.i Revision: 1 Page 2
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Start Time \_\_\_\_\_

Stop Time \_\_\_\_\_

Total Time \_\_\_\_\_

Elements

Standards

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**PREREQUISITES: NONE**

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\*1. Examinee obtains EOP package from the EOP locker in the Main Control Room

\*1. EOP package obtained.

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**CAUTION: The following steps involve working with energized circuits.**

Should note electrical safety precautions and safety equipment, listed in the procedure.

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**CUE: Lead is lifted**

\*2. At RR H11-P857, lift lead at Terminal B-171 (Division 1)

\*2. Lead lifted from Terminal B-171

Per the procedure the operator is required to install a terminal boot on the lifted lead to prevent accidental reconnection. The boot is included in the EOP package.

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**CUE: Lead is lifted**

\*3. At RR H11-P870, lift lead at Terminal E-191 (Division 2)

\*3. Lead lifted from Terminal E-191

Per the procedure the operator is required to install a terminal boot on the lifted lead to prevent accidental reconnection. The boot is included in the EOP package.

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**CUE: Acknowledge report as Control Room**

4. Report 29.ESP.23 complete to CR

4. Report made

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\_\_\_\_\_ SATISFACTORY

\_\_\_\_\_ UNSATISFACTORY

Terminating Cue(s):

RBCCW to Drywell Defeats are installed per 29.ESP.23.
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**JOB PERFORMANCE MEASURE**  
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Defeat of RBCCW/EECW to Drywell	No.: NRC EXAM 2004-301-B2.i Revision: 1 Page 3
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**FOLLOW-UP DOCUMENTATION QUESTIONS**

Reason for Followup question(s):

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Question:

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Reference:

Response:

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Question:

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Reference

Response:

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**JOB PERFORMANCE MEASURE**  
NRC EXAM 2004-301-B2.I

Defeat of RBCCW/EECW to Drywell	No.: NRC EXAM 2004-301-B2.i Revision: 1 Page 4
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**Simulator Setup**

**IC#:**

**Malfunctions:**

**Remote Functions:**

Number	Title	Value
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**Override Functions:**

**Special Instructions:**

**JOB PERFORMANCE MEASURE**  
NRC EXAM 2004-301-B2.I

**JPM B2.i Cue Sheet**

**Initial Conditions:**

EOP flowcharts direct Defeat of RBCCW/EECW Logic per 29.ESP.23

**Initiating Cue(s):**

CRS directs you to defeat RBCCW/EECW Isolations per 29.ESP.23

**JOB PERFORMANCE MEASURE**

NRC EXAM 2004-301-B2.J

Job Position NO	No. NRC EXAM 2004-301-B2.j	Revision 0
JPM Title Startup a UPS Rectifier Charger/Inverter	Duration 20 min	Page COVER SHEET

Examinee: \_\_\_\_\_ SRO / RO

Evaluator: \_\_\_\_\_

Evaluation Method: Perform / Plant

Start Time \_\_\_\_\_

Stop Time \_\_\_\_\_

Total Time \_\_\_\_\_

PERFORMANCE EVALUATION SUMMARY			
Step #	S	U	Comments
1			
*2			
*3			
4			
5			
6			
*7			
8			
*9			
10			
11			
12			

\_\_\_\_\_ SATISFACTORY

\_\_\_\_\_ UNSATISFACTORY

ORAL EVALUATION (Not Required for ILO Exams)			
Question #	S	U	Comments
			TIME:
			TIME:

\_\_\_\_\_ SATISFACTORY

\_\_\_\_\_ UNSATISFACTORY

**OVERALL EVALUATOR COMMENTS:**

Evaluator Signature / Date: \_\_\_\_\_

**JOB PERFORMANCE MEASURE**  
NRC EXAM 2004-301-B2.J

Startup a UPS Rectifier Charger/Inverter	No.: NRC EXAM 2004-301-B2.j Revision: 0 Page 1
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References: Required (R) / Available (A)

[23.308.01 \(R\)](#)

Tools and Equipment Required:

None

Preferred Evaluation Method:

Perform	_____	Walkthrough	_____ X _____	Discuss	_____
Plant	_____ X _____	Simulator	_____	Classroom	_____

Evaluator Notes:

Ensure the examinee does not touch any plan equipment.

**ENSURE ALL INDUSTRIAL AND PERSONNEL SAFETY PRACTICES ARE USED AND ENFORCED  
AT ALL TIMES.**

**K/A**

SYSTEM: 262001 AC Electrical Distribution - A1. Ability to predict and/or monitor changes in parameters associated with operating the AC ELECTRICAL DISTRIBUTION controls including:

A1.05 Breaker Lineups (3.2/3.5)

Task Standard:

UPS A Charger/Inverter is running and ready to be transferred to the Normal Power Supply.

Initial Conditions:

UPS A Rectifier Charger/Inverter has been shutdown to perform corrective maintenance.

The maintenance is finished and the PMT was completed satisfactorily.

The electrical lineup verification has been completed.

Initiating Cue(s):

The Control Room orders you to Startup UPS Rectifier Charger/Inverter A.



## JOB PERFORMANCE MEASURE

NRC EXAM 2004-301-B2.J

Startup a UPS Rectifier Charger/Inverter	No.: NRC EXAM 2004-301-B2.j Revision: 0 Page 2
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Start Time \_\_\_\_\_

Stop Time \_\_\_\_\_

Total Time \_\_\_\_\_

### Elements

### Standards

**PREREQUISITES: NONE**

**NOTE: Unless otherwise noted, steps are performed at Panel R3100-S004 (S012). Details for Mimic Bus are provided in Enclosure B, UPS Mimic Bus Diagram.**

**Initial condition:       TIMER RESET**

**CUE:** Timer Reset Toggle Switch is in TIMER RESET (float)

1. Verify or place Timer Reset toggle switch in TIMER RESET (float).

1. Timer Reset Toggle Switch is in TIMER RESET (float).

**Initial condition:       OFF**

**CUE:** Rectifier DC Output breaker is ON

\*2. Place Rectifier DC Output circuit breaker in ON

\*2. Rectifier DC Output breaker is ON.

**Initial condition:       OFF**

**CUE:** Rectifier AC Input breaker is ON

\*3. Place Rectifier AC Input circuit breaker in ON.

\*3. Rectifier AC Input breaker is ON.

**Initial condition:       ON**

**CUE:** AC Normal Source light is ON

4. Verify amber AC Normal Source light is ON (mimic bus).

4. AC Normal Source light is ON.

**CUE:** Rectifier DC Output voltmeter is 212 VDC

5. Verify Rectifier DC Output voltmeter is greater than 210 VDC

5. Rectifier DC Output voltmeter is >210 VDC.

**CAUTION:** If Battery DC Input voltmeter (located on UPS Bus A only) is less than 210 VDC, do not start UPS Bus A (B) Inverter.

**CUE:** Battery DC Input voltmeter is 212 VDC

6. Verify Battery DC Input voltage is greater than 210 VDC

6. Battery DC Input voltmeter is >210 VDC.

**Initial condition:       OFF**

**CUE:** DC Filter Charge toggle switch in ON

\*7. On Panel R3100-S011(S007), place DC Filter Charge toggle switch in ON

\*7. DC Filter Charge toggle switch in ON.

## JOB PERFORMANCE MEASURE

NRC EXAM 2004-301-B2.J

Startup a UPS Rectifier Charger/Inverter	No.: NRC EXAM 2004-301-B2.j Revision: 0 Page 3
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**CUE:** Red DC Filter Charged light is ON, after 3 seconds

8. On Panel R3100-S011(S007), after 3 seconds, verify red DC Filter Charged light is ON

8. Red DC Filter Charged light is ON

**CAUTION:** Do not close the DC Input circuit breaker unless the red DC Filter Charge light is ON.

**EVALUATOR NOTE:** The evaluator may use time compression on the next step instead of waiting for the 15 minute warm up time.

**Initial condition: OPEN**

**CUE:** Inverter DC Input circuit breaker is shut

- \*9. When logic circuitry has warmed up for at least 15 minutes and red DC Filter Charged light is ON at Panel R3100-S011(S007), close Inverter DC Input circuit breaker

- \*9. Inverter DC Input circuit breaker is shut

**NOTE:** After Inverter DC Input circuit breaker is closed, UPS A Inverter will slowly build up AC output voltage.

**Initial condition: OUTPUT**

**CUE:** Source Select switch is in OUTPUT

10. Verify Source Select switch in OUTPUT

10. Source Select switch is in OUTPUT

**CUE:** AC Output voltage is 120 VAC

11. Verify AC output voltage is 117.5 to 122.5 VAC as indicated on AC Voltage meter

11. AC output voltage is 117.5 to 122.5 VAC

**CUE:** Amber Inverter AC Output light is ON

12. Verify amber Inverter AC Output light is ON (Mimic Bus)

12. Amber Inverter AC Output light is ON

**CUE:** Amber Inverter AC Output light is ON

**Inform Candidate that this concludes this JPM**

\_\_\_\_\_ SATISFACTORY

\_\_\_\_\_ UNSATISFACTORY

Terminating Cue(s):

UPS A has been started and is ready to transfer to the Normal Power Supply.

**JOB PERFORMANCE MEASURE**  
**NRC EXAM 2004-301-B2.J**

Startup a UPS Rectifier Charger/Inverter	No.: NRC EXAM 2004-301-B2.j Revision: 0 Page 4
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**FOLLOW-UP DOCUMENTATION QUESTIONS**

Reason for Followup question(s):

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Question:

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Reference:

Response:

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**JOB PERFORMANCE MEASURE**  
NRC EXAM 2004-301-B2.J

Startup a UPS Rectifier Charger/Inverter	No.: NRC EXAM 2004-301-B2.j Revision: 0 Page 5
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**Simulator Setup**

**IC#:**

**Malfunctions:**

**Remote Functions:**

Number	Title	Value
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**Override Functions:**

**Special Instructions:**

**JOB PERFORMANCE MEASURE**  
NRC EXAM 2004-301-B2.J

**JPM B2.j Cue Sheet**

**Initial Conditions:**

UPS A Rectifier Charger/Inverter has been shutdown to perform corrective maintenance.  
The maintenance is finished and the PMT was completed satisfactorily.  
The electrical lineup verification has been completed.

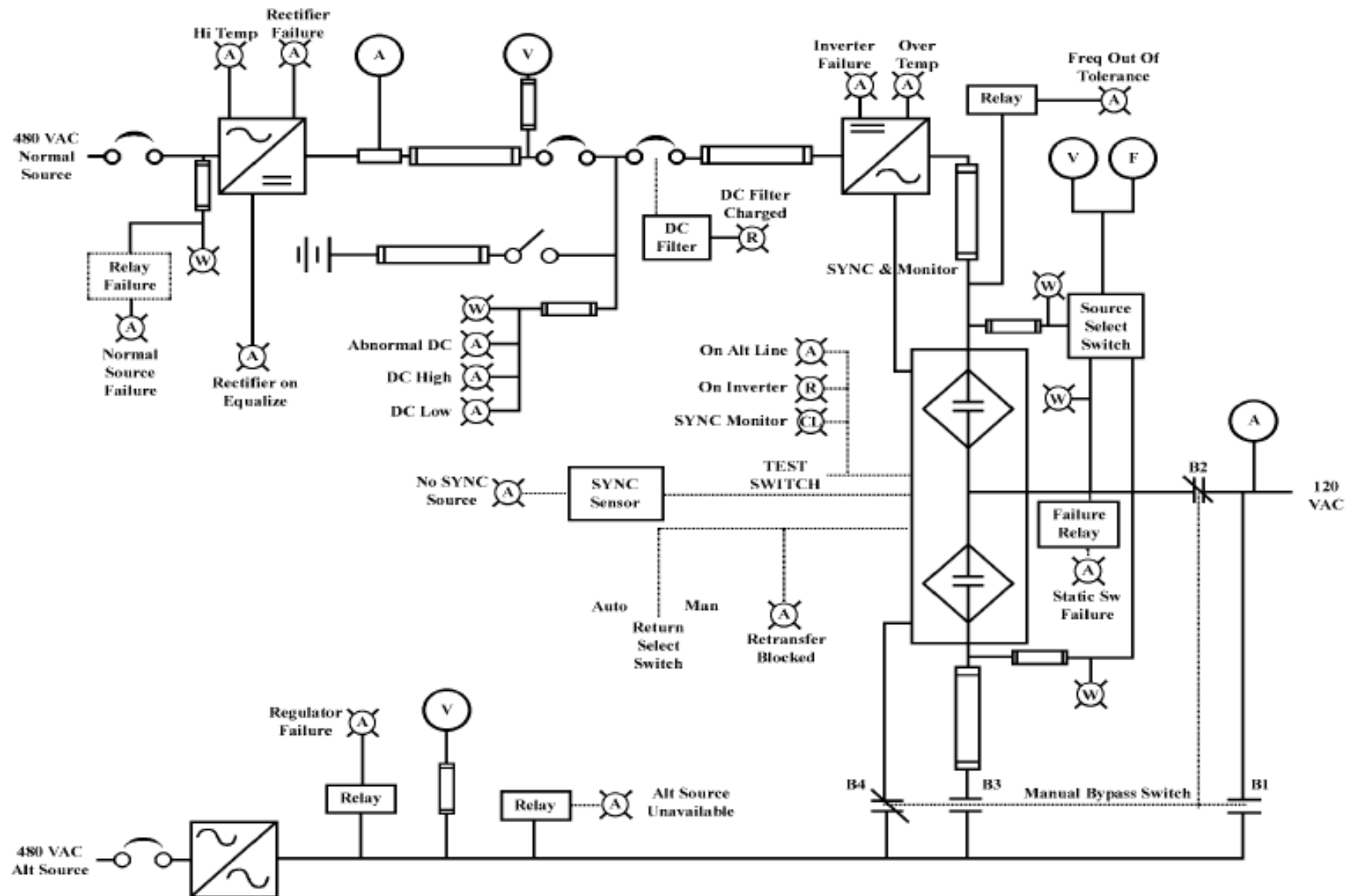
**Initiating Cue(s):**

The Control Room orders you to Startup UPS Rectifier Charger/Inverter A.

JOB PERFORMANCE MEASURE  
NRC EXAM 2004-301-B2.J

040303

UPS MIMIC BUS DIAGRAM



**JOB PERFORMANCE MEASURE**  
**NRC EXAM 2004-301-B2.K**

Job Position NOR	No. NRC EXAM 2004-301-B2.k	Revision 0
JPM Title Vent the Scram Air Header	Duration 15 minutes	Page COVER SHEET

Examinee: \_\_\_\_\_ SRO / RO / NO / SROC / STA

Evaluator: \_\_\_\_\_

JPM Type: **Normal** / Faulted / Time Critical

Evaluation Method: Perform / **Walkthrough** / Discuss

(Circle method used) **Plant** / Simulator / Classroom

Total Time: \_\_\_\_\_

PERFORMANCE EVALUATION SUMMARY			
Step #	S	U	Comments
*1			
*2			
*3			
*4			
*5			
*6			
*7			

\_\_\_\_\_ SATISFACTORY

\_\_\_\_\_ UNSATISFACTORY

ORAL EVALUATION (Not Required for ILO Annual Exams)			
Question #	S	U	Comments
			TIME:
			TIME:
			TIME:
			TIME:

\_\_\_\_\_ SATISFACTORY

\_\_\_\_\_ UNSATISFACTORY

**OVERALL EVALUATOR COMMENTS:**

Evaluator Signature / Date: \_\_\_\_\_

**JOB PERFORMANCE MEASURE**  
NRC EXAM 2004-301-B2.K

Vent the Scram Air Header	No.: NRC EXAM 2004-301-B2.k Revision: 0 Page 1
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References: Required (R) / Available (A)

[29.ESP.03](#) Section 7.0, "Vent the Scram Air Header"

Tools and Equipment Required:

A ten-inch crescent wrench is located in the EOP Support Tool Box.

Preferred Evaluation Method:

Perform	_____	Walkthrough	_____X_____	Discuss	_____
Plant	_____X_____	Simulator	_____	Classroom	_____

Evaluator Notes:

**ENSURE ALL INDUSTRIAL AND PERSONNEL SAFETY PRACTICES ARE USED AND ENFORCED  
AT ALL TIMES.**

**K/A     SYSTEM:**

212000 A4.11 Manually operate RPS using scram air header pressure. 3.7 /3.7

212000 A2.18 Predict the impact of low scram air header pressure on RPS operation. 3.8 / 3.9

Task Standard:

The scram air header is aligned to vent through the C11R013 piping IAW 29.ESP.03 Section 7.0

Initial Conditions:

EOP Flow Charts direct alternate control rod insertion methods.

Initiating Cue(s): CRS directs you to vent the scram air header IAW 29.ESP.03 Section 7.0.



**JOB PERFORMANCE MEASURE**  
NRC EXAM 2004-301-B2.K

Vent the Scram Air Header	No.: NRC EXAM 2004-301-B2.k Revision: 0 Page 2
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Start Time \_\_\_\_\_

Stop Time \_\_\_\_\_

Total Time \_\_\_\_\_

<u>Elements</u>		<u>Standards</u>	
*1.	Obtains the EOP package from the Main Control Room	*1.	EOP package obtained
<b>CUE:</b> C1100-F095 is closed			
*2	Close C1100-F095, Backup Scram Valve Pilot Air Header Isolation Valve (RB1-G11)	*2	C1100-F095 is closed
<b>CUE:</b> C1100-F088 is closed			
*3	Close C1100-F088, Scram Valve Pilot Air Header PI C11-R013 and C11-N012 Source Valve (RB1-G11)	*3.	C1100-F088 is closed
<b>CUE:</b> C1100-F0226 is open <b>or</b> piping disconnected from C11-R013			
NOTE: There is a cap on the end of the connection for C1100-F226. This cap must be removed to vent air.			
*4	Perform one of the following: a. Open C1100-F226, Scram Valve Pilot Air Header C11N012 & C11R013 Calibration Valve (RB1-11) b. Disconnect piping to C11-R013, Scram Valve Pilot Air Header Press Ind (RB1-G11)	*4.	C1100-F0226 is open or piping disconnected from C11-R013
<b>CUE:</b> C1100-F088 is open <b>AND</b>			
<ul style="list-style-type: none"> <li>If cap is removed, there is a large hissing sound (air noise), <b>OR</b></li> <li>If cap is not removed, there is no air noise</li> </ul>			
*5.	Open C1100-F088, Scram Valve Pilot Air Header PI C11-R013 and C11-N012 Source Valve (RB1-G11)	*5	C1100-F088 is open
<b>CUE:</b> From the Control Room, all rods are in. And <b>after</b> he/she shuts the valve, C1100-F088 is closed.			
*6.	Close C1100-F088, Scram Valve Pilot Air Header PI C11-R013 and C11-N012 Source Valve (RB1-G11)	*6.	C1100-F088 is closed
*7	Open C1100-F095, Backup Scram Valve Pilot Air Header Isolation Valve (RB1-G11)	*7.	C1100-F095 is open
_____ SATISFACTORY		_____ UNSATISFACTORY	

Terminating Cue(s):

Scram air header is vented per 29.ESP.03 Section 7.0.
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**JOB PERFORMANCE MEASURE**  
NRC EXAM 2004-301-B2.K

Vent the Scram Air Header	No.: NRC EXAM 2004-301-B2.k Revision: 0 Page 3
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**FOLLOW-UP DOCUMENTATION QUESTIONS**

Reason for Followup question(s):

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Question:

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Reference:

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Response:

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**JOB PERFORMANCE MEASURE**  
NRC EXAM 2004-301-B2.K

Vent the Scram Air Header	No.: NRC EXAM 2004-301-B2.k Revision: 0 Page 4
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**Simulator Setup**

**IC#:**

**Malfunctions:**

**Remote Functions:**

Number	Title	Value
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**Override Functions:**

**Special Instructions:**

**JOB PERFORMANCE MEASURE**  
NRC EXAM 2004-301-B2.K

**JPM B2.k Cue Sheet**

**Initial Conditions:**

EOP Flow Charts direct alternate control rod insertion methods.

**Initiating Cue(s):**

CRS directs you to vent the scram air header IAW 29.ESP.03 Section 7.0